



**EFFECT OF PROJECT MANAGEMENT PRACTICES ON THE PERFORMANCE OF THE MUHANGA ROAD–
KARONGI CONSTRUCTION PROJECT BY HORIZON LTD, RWANDA**

Mushimiyimana Viateur

Corresponding Email: viateurmushimiyimana@gmail.com

Master of Project Management, University of Kigali, Rwanda

Received: March 8, 2025; Accepted: April 10, 2025; Published: April 14, 2025

Cite this Article: Mushimiyimana Viateur. (2025). Effect of Project Management Practices on the Performance of the Muhanga Road–Karongi Construction Project By Horizon Ltd, Rwanda. In Brainae Journal of Business, Sciences and Technology (Vol. 9, Number 04, pp. 601-608).

Copyright: BJBST, 2025 (All rights reserved). This article is open access, distributed under the Creative Commons Attribution license, which permits unlimited use, distribution, and reproduction on any medium, provided the original work is properly cited.

DOI: <http://doi.org/10.5281/zenodo.15210684>

Abstract

The general objective was the effect of project management practices on performance of Muhanga Road–karongi construction project by Horizon Ltd, Rwanda. The study adopted descriptive research design. To collect primary data the respondents answered questions administered to them through questionnaires. Unit of observation consisted of the Project manager, Human Resource office manager, site foremen, Draftsmen, Architecture, Quantity surveyors, Engineers, Technical staff. The target population for this study was 600 project employees and the study was undertake sample size of 240 respondents. The findings revealed that M&E planning, stakeholder involvement in M&E, and M&E implementation had a notable impact on project performance. The overall mean scores for project planning, project communication, project resource management and project monitoring and evaluation were 4.51, 4.48, 4.29, 4.79 and 4.35, respectively, while the overall mean for project performance was 4.64, indicating a positive performance trend. According to the results, the correlation between project planning, Project communication, Project resource management, and project monitoring and evaluation was 0.950, 0.891, 0.880 and 0.899 respectively. The results present the variables of Effect of project management practices; project planning was statistically significant with p value=0.000^b, the Project communication was statistically significant with p value=0.022^b, and the Project resource management was not statistically significant with p value=0.809^b, and project monitoring and evaluation was not statistically significant with p value=0.051^b. Ministry of Infrastructure (MININFRA), engage citizens actively in the construction sector. This can be achieved through awareness campaigns, training programs, and collaborative initiatives that empower individuals to participate in this industry, ultimately leading to enhanced employment opportunities and financial benefits for the community.

Keywords: *Project Management Practices, Road Construction, Project Performance, Rwanda, Monitoring and Evaluation*

1. Introduction

Project management in the construction industry is one of the most important factors affecting project performance. The delays in the delivery of construction projects are seen as one of the most frequent problems in the construction industry. Management is a vital part of every business. Management's job is to prepare, coordinate, and monitor resources efficiently to meet the organizational objectives and goals (Akinradewo, O. Aigbavboa, C., 2019). Project implementation calls for hiring the right skills, training some of the people without necessary skills, assigning responsibilities, and establishing performance standards as well as the reporting process (Sweis, J., Sweis, R., Rumman, M. A., Hussein, R. A., Dahiyat, S. E., 2018), project management is the coordination and combination of the Project's initiation, preparation, implementation, control, reporting, and closure steps. Performance of water and road projects is crucial to the development of the country's economic and social aspects worldwide, but particularly in the USA (Dominic, B., 2020). If you take into account the fact that 57% of subcontractors in the USA believe they have problems locating skilled labour, you can feel perplexed in your hunt for suitable personnel. Our enthusiastic recruiting staff provides organizations across the country with qualified, seasoned, and reliable employees because they are experts at finding top talent (Sanchez, J., Haas, C., 2018). The term program performance is quite ambiguous especially in the construction projects, which are considered and evaluated from the project management triangle perspective (Njau, M., Ogolla, M., 2017). Performance is the accomplishment of a given task in this case a project measured against preset known standards of accuracy, completeness, cost, and speed (Omondi, R., 2017). This is the success level of a program based on the following criteria: effectiveness, relevance, impact, efficiency, timeliness and sustainability. This model suggested that a project is successful when it is completed on time, budget estimates and meets all predetermined specifications. Rwanda's road sector has gained significant attention as part of the country's strategy to enhance infrastructure for economic growth. The government views the road network as crucial for facilitating trade, connecting rural and urban areas, and improving access to services. From 2019 to 2022, Rwanda expanded its road network from around 14,000 kilometers to over 16,000 kilometers, with plans for further growth through public-private partnerships and investments (RTDA., 2022).

2. Statement of the Problem

In an ideal project management scenario, construction projects such as the Muhanga-Ruhango road project by Horizon Ltd. would be completed on time, within budget, and meet all specified quality standards. Optimal project management involves effective planning, clear communication among stakeholders, and efficient resource allocation, ensuring that potential risks are anticipated and mitigated (PML, 2021). Projects would leverage modern technologies and methodologies, providing an accurate estimation of costs and timelines while utilizing skilled labor and quality materials (Dare, L., Niyonzima, J., Rurangwa, C., 2020). Currently, the Rwandan construction industry is grappling with significant challenges, including frequent cost overruns and project delays. A recent study revealed that over 70% of construction projects in Rwanda face budgetary constraints and time overruns (MINITRA, 2023). Specifically, Horizon Ltd.'s Muhanga Road-Karongi project has experienced delays of over 15%, primarily attributed to inadequate project management practices (Kagabo, J., Musoni, M., & Sebuho, Y., 2023). The consequences of these challenges are substantial. Delays and cost overruns lead to financial losses, reduced stakeholder confidence, and an increase in disputes and litigation among contractors and clients (Musoni, M., Sebuho, Y., 2024). Poor project performance can also hinder economic development, affecting job creation and infrastructure quality, ultimately impacting the community's access to essential services (Niyonzima, J., 2023).

The scale of the problem is alarming, with an estimated 60% of public construction projects in Rwanda not meeting their scheduled completion times or budgetary constraints (Ntwali, A., 2023). The inefficiencies in project management have a compounded effect, leading to an estimated financial loss of over \$2 million annually for affected projects across the country (Kagabo, J., Musoni, M., & Sebuho, Y., 2023). Attempts to address project management inefficiencies in Rwanda have included training programs for project managers and the adoption of new project management software (Umuhoza, K., 2022). Various stakeholders, including the Rwandan government and private sector entities, have implemented guidelines aimed at enhancing compliance and accountability within construction projects (MINITRA, 2023). Despite these interventions, the effectiveness has been limited due to a lack of sustained commitment from project managers to apply learned skills, inadequate communication among stakeholders, and resistance to change within traditional project management frameworks (Mugisha, R., 2024). Additionally, resource constraints and a training gap in utilizing modern project management tools have hindered optimal project execution (Cyusa, S., 2022). This study aims to identify key factors leading to delays and inefficiencies, assess the current practices in place, and provide recommendations to improve project outcomes based on empirical evidence from the local context through this study that intends to explore the effect of project management practices on the performance of the Muhanga Road-Karongi construction project by Horizon Ltd. in Rwanda.

3. Objectives of the Study

3.1 Specific Objectives

- i. To assess the effect of project planning on performance of road construction project implemented by Horizon Ltd
- ii. To assess the effect of project communication on performance of road construction project implemented by Horizon Ltd
- iii. To determine the effect of project resource management on performance of road construction project implemented by Horizon Ltd
- iv. To examine the influence of project monitoring and evaluation on performance of road construction project implemented by Horizon Ltd

3.2 Hypotheses of the Study

The study intends to test the validity of the following hypothesis:

H₀₁= There is no significant effect of project planning on performance of road construction project implemented by Horizon Ltd

H₀₂= There is no significant effect of project communication on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd

H₀₃= There is no significant effect of project resource management on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd

H₀₄= There is no significant influence of project monitoring and evaluation on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd

4. Literature Review

4.1 Theoretical framework

This study developed reference to the meaning of the Program Theory, and Social change Theory. Both gave extended understanding on the significance of Effect of project management practices on performance of Muhanga Road-karongi construction project by Horizon Ltd, Rwanda.

4.1.1 Program Theory

Program Theory, as articulated by Carol H. Weiss in 2012, (Weiss, C. H., 2012) serves as a fundamental framework for guiding the monitoring process in project management by elucidating and linking essential project elements. Key tenets of this theory include the use of path diagrams to model the sequence of steps between a program's intervention and its desired outcomes, enabling evaluators to specify variables for monitoring, identify potential breakdowns in the sequence of events, and remain alert to changes in program implementation that could impact the model's pattern (Machelule, J., 2018). The strengths of Program Theory lie in its systematic approach to understanding complex interventions, fostering clarity in project design and implementation, and facilitating robust data triangulation through various collection methods (Kasajja, J., 2015). Conversely, weaknesses include potential oversimplification of complex relationships and difficulty in capturing non-linear interactions within programs. To address these weaknesses, one could incorporate adaptive management practices and embrace complexity theory principles, which account for dynamic interactions in project environments. This theoretical framework is particularly applicable to this study as it informs the development of a comprehensive data collection plan, ensuring that both the implementation process and outcomes are rigorously monitored, thus enhancing the effectiveness of project interventions (Srivastave, A., Teo, T., 2016)

4.1.2 The Cybernetics Theory

The Cybernetics Theory, primarily developed by Norbert Wiener in the 1960s, focuses on the control and communication within complex systems, emphasizing the importance of feedback mechanisms in achieving desired outcomes (Wiener, N., 1961). The key tenets of this theory include the notion that effective feedback can enhance system efficiency, that positive feedback can lead to desired changes while negative feedback necessitates timely responses, and that communication plays a crucial role in the adaptation and evolution of systems. One strength of this theory is its broad applicability across various fields, including engineering, management, and biology, as it fosters an understanding of how systems interact and respond to inputs. However, a notable weakness is its potential oversimplification of complex human behaviors and social interactions within organizational settings. To address this weakness, integrating qualitative insights alongside quantitative data can provide a more nuanced understanding of interpersonal dynamics. In this study on the Effect of project management practices on the performance of the Muhanga Road-Karongi construction project by Horizon Ltd in Rwanda, Cybernetics Theory is applied to underscore the significance of communication and feedback among project managers and teams in optimizing project outcomes and enhancing overall performance (Njiru, A., 2018).

4.2 Empirical Review

(Telsang, B. M., Raymond, M. H., 2014) conducted a study focused on the project planning process and its impact on project performance in India. The objective of the study was to examine how effective planning contributes to successful project implementation and the achievement of project objectives. Utilizing a descriptive research design, Telsang highlighted that effective planning outlines necessary actions, timelines, cost targets, and performance milestones, which are critical for successful project execution. The findings emphasized the importance of clearly defining human resources, equipment, materials, and other necessary resources for project completion. However, the study also acknowledged that even with meticulous planning and resource allocation, unforeseen events can hinder goal achievement. This aligns with current research, which also suggests that adaptability in planning is crucial for handling unexpected challenges. A critical gap identified in Telsang's study is the lack of exploration into strategies for effectively adapting project plans in response to unforeseen circumstances. This research aims to address this gap by investigating adaptive planning methodologies that can enhance project resilience and success in the face of uncertainties.

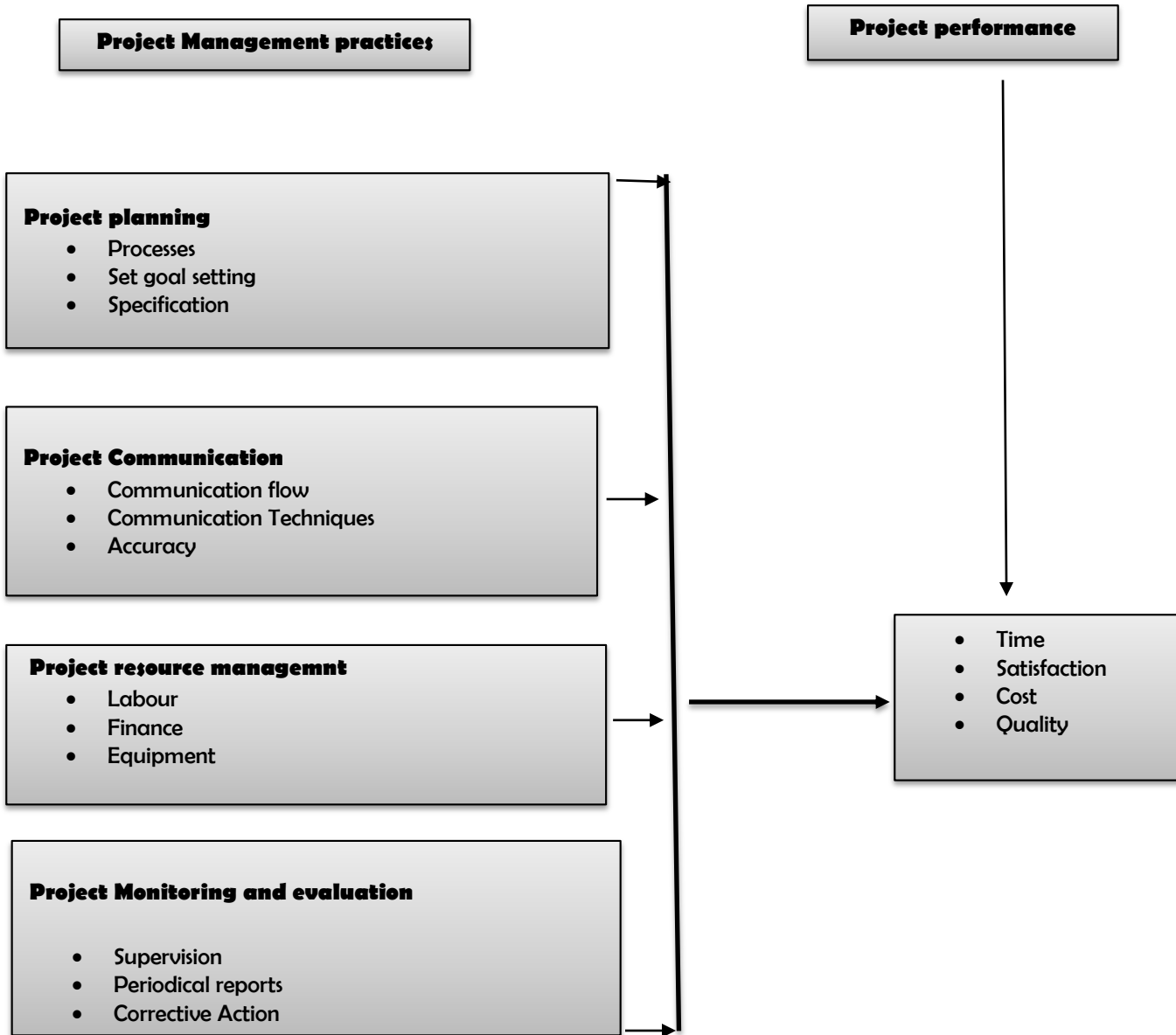
In a study conducted by (Simiyu, N. R., 2018) to investigate the effective communication practices that influenced the international development projects' performance in Pakistan, the objective was to investigate the influence of project management practices on the success of agricultural projects. Employing a qualitative methodology, the research explored various project management practices, including monitoring and evaluation (M&E), planning, implementation, and communication. The findings indicated that these practices notably impacted project success, with an emphasis on the critical role of planning in the initial phases. Participants observed that effective project planning significantly reduced challenges encountered during project execution, thereby minimizing bottlenecks. While Simiyu's study highlights the importance of project management practices, a gap exists in examining the specific contextual factors that might influence their effectiveness in different agricultural settings. To address this gap, our research will incorporate a mixed-methods approach to explore how external variables, such as local socio-economic conditions and stakeholder engagement, affect the relationship between project management practices and the success of agricultural projects

(Nzingu, J., Karanja, P., 2018) conducted a study focusing on gated residential housing projects in Nairobi County, Kenya. The objective of their study was to assess the role of monitoring and evaluation (M&E) in determining the success of construction projects within this context, emphasizing the importance of having a robust M&E function. The methodology employed in the study involved an examination of various gated community construction projects to ascertain the presence and adequacy of M&E systems. The findings of the study revealed that a majority of these projects lacked a budgetary allocation for M&E, despite its recognized significance. This observation underscores a critical gap in project management practices within the gated community sector, highlighting the need for project owners and managers to incorporate M&E tools, such as budgets and logical frameworks, into their planning from inception to completion. A critical view of this literature indicates that while Nzingu and Karanja addressed the absence of M&E functioning, they did not explore the specific barriers that prevent project managers from incorporating M&E budgets. Thus, in our research, we aim to not only highlight the significance of M&E in construction projects but also investigate the underlying challenges related to budgetary allocations for M&E and propose strategic frameworks to overcome these obstacles for more effective project management.

5. Conceptual framework

Independent variable

Dependent variable



Source: Resaercher, 2024

6. Methodology

6.1 Sampling size

Sample size used to ensure the determination of the number of the employees who participated in the study as the respondents from Horizon Ltd in order to reach the researcher intention, Therefore the sample size determination of (Slovin, L., 1980) for sample sizes' calculation includes the (95% confidence level and $\alpha = 0.05$) using the fomulae abovethrough the questionnaires distribution to the respondents in the employees Horizon Ltd in this way

$$n = \frac{N}{1 + N * (e^2)} = \frac{600}{1 + 600 * (0.05^2)} = 240$$

Therefore;

95% is the confidence interval level

Sample size, n =240 from Horizon Ltd

Population, N=600 from Horizon Ltd

Margin error = (5%or 0.05)

Table 6.1: Population distribution and sample size determination

No	Description	Project target	Sample size
1	Finance staff	12	5
2	Human Resource staff	9	3
3	Customer services	30	12
4	Project manager	5	2
5	Site manager	15	6
6	Site admin	25	10
7	Construction site foremen	70	28
8	Draftsmen	25	10
9	Architecture	20	8
10	Quantity surveyors	35	14
11	Engineers	99	40
12	Technical staff	255	102
Total		600	240

7. Data Analysis and Discussion**7.1 Reliability Analysis****Table 7.2 Reliability Analysis of Pilot Test and Actual Data Set**

	Number of items	Pilot Test Cronbach's Alpha	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Project Planning	6	0.912	109.2750	111.790	.973	.934
Project communication	6	0.947	109.4500	123.604	.862	.953
Project resource management	6	0.915	110.5625	97.979	.933	.952
Project monitoring and evaluation	6	0.960	107.5542	134.173	.823	.962
Project performance	6	0.833	108.5083	126.167	.945	.944

Source: Primary data, 2024

Table 7.2 presents the Cronbach's alpha values for each of the specified variables. Cronbach's alpha is a measure used to assess the reliability of variables, with values ranging from 0 to 1. In this study, the Cronbach's alpha values for all variables are considered acceptable, indicating a satisfactory level of reliability.

7.2 Inferential Statistics

This section presents the findings from inferential statistical test including correlation coefficient and multiple linear regression analysis between independent variable and dependent variables in this research study.

7.2.1 Correlation**Table 7.3 Correlation**

		Project planning	Project communication	Project resource management	Project monitoring and evaluation	Project performance
Project planning	Pearson Correlation	1	.903**	.931**	.914**	.950**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	240	240	240	240	240
Project communication	Pearson Correlation	.903**	1	.837**	.916**	.891**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	240	240	240	240	240
Project resource management	Pearson Correlation	.931**	.837**	1	.822**	.880**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	240	240	240	240	240
Project monitoring and evaluation	Pearson Correlation	.914**	.916**	.822**	1	.899**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	240	240	240	240	240
Project performance	Pearson Correlation	.950**	.891**	.880**	.899**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	240	240	240	240	240

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary data, 2024

The results present the relationship between Effect of project management practices and performance of Muhanga Road-karongi construction project by Horizon Ltd, Rwanda • Project management practices and the factors are ;project planning,Project communication,Project resource management and project monitoring and evaluation.It is in this regard, the statistical package for social science (SPSS) software version 25.0 was used to determine the pearson coefficients. The pearson coefficient correlation is between -1 and 1 where -1 to 0 presents negative correlation (-1 to -0.5 indicates high negative correlation and -0.5 to 0 indicates low negative correlation) and 0 to 1 presents positive correlation (0 to 0.5 presents low positive correlation while 0.5 to 1 presents high positive correlation). According to the results, the correlation between project planning, Project communication, Project resource management, and project monitoring and evaluation was 0.950, 0.891, 0.880 and 0.899 respectively, it presents that there was a significant relationship between Effect of project management practices and performance of Muhanga Road-karongi construction project by Horizon Ltd, Rwanda

7.2.2 Regression Analysis

Table 7.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.954 ^a	.911	.909	.73124

a. Predictors: (Constant), project monitoring and evaluation , project resource management , project communication , project planning

Source: Primary data, 2024

The results present the Model Summary, the researcher wanted to know Effect of project management practices and performance of Muhanga Road-karongi construction project by Horizon Ltd, Rwanda, the researcher used regression analysis to measure on the effect of project planning on performance of road construction project implemented by Horizon Ltd ,the effect of project communication on performance of road construction project implemented by Horizon Ltd, the effect of project resource management on performance of road construction project implemented by Horizon Ltd,the influence of project monitoring and evaluation on performance of road construction project implemented by Horizon Ltd,Correlation coefficient (R=0.954^a) demonstrated the relationship between project management practices and performance of Muhanga Road-karongi construction project , therefore The results present the Model Summary, the results present that the R Square=0.911. It was statistically significant clear that 91.1% of all variables of project management practices and the performance of Muhanga Road-karongi construction project can be explained by one's of all variables of the project management practices.

Table 7.5 ANOVA^a of project management practices and performance construction project

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1284.337	4	321.084	600.473	.000 ^b
	Residual	125.659	235	.535		
	Total	1409.996	239			

a. Dependent Variable: project performance

b. Predictors: (Constant), Project monitoring and evaluation , project resource management , project communication , project planning

Source: Primary data, 2024

The results indicate ANOVA^a, the results presented than the variables were statistically significant with F= 600.473 and p value=0.000^b, it means that this model is fit be used in predicting the study variables.

Table 7.6 Coefficients^a of project management practices and performance construction project

Model		Standardized				Sig.
		Unstandardized Coefficient: B	Std. Error	Beta	T	
1	(Constant)	5.960	.552		10.790	.000
	Project planning	.598	.062	.749	9.610	.000
	Project communication	.109	.047	.123	2.298	.022
	Project resource management	-.008	.035	-.013	-.242	.809
	Project performance	.109	.056	.113	1.957	.051

a. Dependent Variable: PROJECT PERFORMANCE

Source: Primary data, 2024

The results present the constant of independent variables of Effect of project management practices . It is statistically significant since p value is less than 0.05. The results present the variables of Effect of project management practices;project planning was statistically significant with p value=0.000^b, the Project communication was statistically significant with p value=0.022^b, and the Project resource management was not statistically significant with p value=0.809^b. and project project monitoring and evaluation was not statistically significant with p value=0.051^b.

According to SPSS generation of table 4.6 in regard to the equation $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$, where by Y= Project performance,then the Equation served as;

$$Y = 5.960 + 0.598X_1 + 0.109X_2 + 0.008X_3 + 0.109X_4 + 0.73124\varepsilon$$

It is in this regard that using the regression equation mentioned above in respect to the holding all constants (project planning, Project communication, Project resource management, and project monitoring and evaluation) in line with the performance of

construction project was at 5.960, This indicated that, this ensured project performance, there was a need project planning, Project communication, Project resource management, and project monitoring and evaluation to undertake and ensure performance of construction project

The SPSS version 30 Calculated the t-statistic as t-test increased on 9.610 and t-test increased on 2.298 and t-test decreased on -0.242 and t-test increased on 1.957. and the results present the constant of independent variables of project management practices. It is statistically significant since p value is less than 0.05. The results present the variables of project planning was statistically significant with p value=0.000^b, the Project communication was statistically significant with p value=0.022^b, and the Project resource management was not statistically significant with p value=0.809^b and project monitoring and evaluation was not statistically significant with p value=0.051^b.

From the table 4.6 Coefficients of project work schedule. and employee productivity at Construction, Unstandardized Coefficients were used in order to attain the t-test used in explanation above by B values undergo series of dividing from B value and std error thus attainment of the t-test; 5.960, divided 0.552 resulted into constant with 10.790, then 0.598 divided 0.062 resulted into project planning factor with 9.610, then 0.109 divided 0.047 resulted into project communication factor with 2.298, and then -0.008 divided 0.035 resulted into Project resource management with factor with -0.242 and then 0.109 divided 0.056 resulted into project monitoring and evaluation with factor with 1.957 value .

7.3 Hypothesis testing

In order to test the study's four formulated hypothesis, the t statistic that tests whether a B value is significantly different from zero ($H_0: \beta=0$) The study computed simple regression analysis to test the study hypothesis. For p-value<0.05, H_0 was rejected; and H_3, H_4 accepted

7.3.1 Testing research hypothesis One

H_{01} = There is no significant effect of project planning on performance of road construction project implemented by Horizon Ltd. As evident in Table 7.6, the Unstandardized beta value of project planning on performance of road construction project implemented by Horizon Ltd was significantly greater than zero ($\beta_1=0.598$, p-value=0.000<0.05, t= 9.610).the null hypothesis was rejected because p-value=0.000 is less than 5% level of significant, hence, the project planning had significant effect on performance of road construction project .

7.3.2 Testing research hypothesis two

H_{02} = There is no significant effect of project communication on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd . As evident in Table 7.6, the Unstandardized beta value of significant effect of project communication on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd was significantly greater than zero ($\beta_2=-0.109$, p-value=0.022<0.05, t= 2.298). The null hypothesis was rejected because p-value=0.022 is less than 5% level of significant, hence, the project communication had significant effect on performance of Muhanga Road-karongi construction project

7.3.3 Testing research hypothesis Three

H_{03} = There is no significant effect of project resource management on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd. As evident in Table 4.14, the Unstandardized beta value of project resource management on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd was insignificantly greater than zero ($\beta_3=-0.008$, p-value=0.809 >0.05, t=-0.242). the null hypothesis was accepted because p-value=0.809 is greater than 5% level of significant, hence, project resource management had insignificant effect on on performance of Muhanga Road-karongi construction project

7.3.4 Testing research hypothesis; Four

H_{04} = There is no significant influence of project monitoring and evaluation on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd. As evident in Table 4.12, the Unstandardized beta value of project monitoring and evaluation on performance of Muhanga Road-karongi construction project implemented by Horizon Ltd was significantly greater than zero ($\beta_4=0.109$, p-value=0.051>0.05, t=1.957). Subsequently the null hypothesis was accepted because p-value=0.051 is greater than 5% level of significant, hence project monitoring and evaluation had a statistically significant effect on performance of Muhanga Road-karongi construction project

8. Conclusions and recommendation

8.1. Conclusions

Effect of project management practices is of highly valuable in context of the performance of Muhanga Road-karongi construction project by Horizon Ltd operations in order to achieve the Effect of project management practices on performance of Muhanga Road-karongi construction project operative level. Project management practices provided a crucial mechanism of how any project management practices on the erformance of Muhanga Road-karongi construction project works and other related activities in which they can be measured and how it can help to the achievement of effect of project management practices objectives (Kerzner, H., 2019). From this perspective view in as far as the study is concerned, a researcher concluded while basing on the results obtained. According to the results, the correlation between project planning, Project communication, Project resource management, and project monitoring and evaluation was 0.950, 0.891, 0.880 and 0.899 respectively, and the results presented than the variables were statistically significant with p value=0.000^b, it concluded that there was a significant Effect of project management practices on performance of Muhanga Road-karongi construction project by Horizon Ltd, Rwanda

8.2 Recommendations

According to the results of this study, researcher provided the following recommendations:

The performance of the Muhanga Road-Karongi construction project by Horizon Ltd in Rwanda significantly benefits from effective project management practices, as indicated by high correlation values between key management aspects ;project planning

(0.950), project communication (0.891), project resource management (0.880), and project monitoring and evaluation (0.899). These findings highlight the importance of robust project management in enhancing the overall success of construction projects and, consequently, the sustainability of the construction industry. To capitalize on this relationship and promote economic improvement among Rwandan citizens, it is recommended that the government, particularly the Ministry of Infrastructure (MINIFRA), engage citizens actively in the construction sector. This can be achieved through awareness campaigns, training programs, and collaborative initiatives that empower individuals to participate in this industry, ultimately leading to enhanced employment opportunities and financial benefits for the community.

REFERENCES

- Niyonzima, J. (2023). *Infrastructure Development and Economic Impact in Rwanda: A Focus on Construction Delays*. Kigali: Rwanda Economic Forum. .
- Akinradewo, O. Aigbavboa, C. (2019). *Project Management in Construction: Challenges, Strategies, and Performance* (Vol. 37). International Journal of Project Management.
- Cyusa, S. (2022). *Challenges in Project Management Efficiency in Rwanda*. Kigali: Rwanda Institute of Project Management.
- Dare, L., Niyonzima, J., Rurangwa, C. (2020). *Optimizing Construction Project Performance: Strategies and New Technologies* (Vol. 146). Journal of Construction Engineering and Management.
- Dominic, B. (2020). *Infrastructure and Economic Development: The Role of Water and Road Projects in Enhancing Economic Growth* (Vol. 45). Journal of Economic Development.
- Kagabo, J., Musoni, M., & Sebuho, Y. (2023). *Analyzing Delays in Rwandan Construction Projects: A Case Study of Muhanga Road-Karongi* (Vol. 41). International Journal of Project Management.
- Kasaija, J. (2015). *The role of program theory in monitoring and evaluation* (Vol. 3). Journal of Project Management.
- Kerzner, H. (2019). *Project management: A systems approach to planning, scheduling and controlling (10th ed.)*. John Wiley & Sons. . John Wiley & Sons.
- MINITRA. (2023). *State of the Construction Industry Report*. Kigali: Government of Rwanda, Ministry of Infrastructure.
- MINITRA (2023). *State of the Construction Industry Report*. Kigali: Government of Rwanda, Ministry of Infrastructure.
- Muchelule, J. (2018). *Evaluating interventions using program theory: A comprehensive review*. *Evaluation Review* (Vol. 42).
- Mugisha, R. . (2024). *Evaluating the Impact of Training on Project Management Outcomes in Rwanda* (Vol. 24). Rwanda Journal of Economics and Business.
- Musoni, M.,Sebuho, Y. (2024). *Cost Overruns in Construction Projects: An Analysis of Causative Factors in Rwanda* (Vol. 12). African Journal of Construction.
- Njau, M., Ogolla, M. (2017). *Evaluating Program Performance in Construction Projects.Perspectives and Challenges*.
- Njiru, A. (2018). *Cybernetics and its Implications in Project Management*.
- Ntwali, A. (2023). *Estimating Financial Losses Due to Delays in Rwandan Public Projects*. Rwanda Ministry of Infrastructure Report.
- Nzingu, J.,Karanja, P. (2018). *Influence of monitoring and evaluation practices on success of gated residential housing projects in Nairobi County, Kenya* (Vol. 5). The Strategic Journal of Business & Change Management.
- Omondi, R. (2017). *Performance Measurement in Project Management: Concepts and Practices*.
- PMI. (2021). *A guide to the project management body of knowledge*. O'Reilly Online Learning. <https://doi.org/6642>.
- RTDA. (2022). *Government of Rwanda. Rwanda Transport Sector Review*. .
- Sanchez, J., Haas, C. (2018). *The Challenges of Skilled Labor in Construction*.
- Simiyu, N. R. (2018). *Project management practices and performance of agricultural projects by community-based organizations in Bungoma County, Kenya*. Doctoral dissertation. Kenyatta University.
- Slovin, L. (1980). *Polling Methods: A Sampling Theory for Public Opinion Research*. (Vol. 3). American Sociological Review.
- Srivastave, A., Teo, T. (2016). *Development of program theory for social programs: Techniques and applications* (Vol. 4). International Journal of Social Science Research.
- Sweis, J., Sweis, R., Rumman, M. A., Hussein, R. A., Dahiyat, S. E. (2018). *Cost overruns in public construction projects: The case of Jordan* (Vol. 9). Journal of American Science.
- Telsang, B. M., Raymond, M. H. (2014). *Exploiting organizational knowledge in developing IS project cost and schedule estimates: An empirical study*. College of Business & Behavioral Sciences, Clemson University.
- Umuhzoza, K. (2022). *Innovations in Project Management Training in Rwanda*. Kigali. National University of Rwanda.
- Weiss, C. H. (2012). *How can theory-based evaluation make greater headway*.*American Journal of Evaluation*, 33(1), 5-12. (Vol. 33). American Journal of Evaluation.
- Wiener, N. (1961). *Cybernetics: Or Control and Communication in the Animal and the Machine*. MIT Press.